



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,897	01/26/1999	AKIHIRO KOMATSU	Q53086	9842
7590	01/25/2005		EXAMINER	
SUGHRUE MION ZINN MACPEAK & SEAS 2100 PENNSYLVANIA AVENUE N W WASHINGTON, DC 200373202			CROSS, LATOYA I	
			ART UNIT	PAPER NUMBER
			1743	
DATE MAILED: 01/25/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/236,897	KOMATSU, AKIHIRO	
	Examiner LaToya I. Cross	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 2 4-6 8-23 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to Applicants' amendment filed on November 26, 2003.

Claims 1, 2, 4-6 and 8-23 are pending.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 2, 5, 6 and 9-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,296,069 to Smith et al in view of US Patent 6,180,061 to Bogen et al and US Patent 5,059,893 to Quenin et al.

Smith et al '069 disclose an apparatus for processing analysis slides in a chemical analyzer. The apparatus comprises a first meter device (18) for metering (spotting) sample fluid from sample cups on a sample tray onto an analysis slide of the colorimetric type. A second meter device is provided to deposit sample and reference fluid onto analysis slides of the potentiometer type (col. 3, lines 40-45). Incubators (22, 24) are provided to function with analysis means (23, 25) (equivalent to Applicants' claimed concentration measuring means). The analysis means measure a change in the analysis slides as a result of the fluid being deposited thereon (col. 4, lines 40-45). Results from the analysis means (25) may be transmitted to a computer for appropriate calculations of concentration for various samples (col. 7, lines 53-58). Control circuits are provided which include thermistors for controlling the temperature of various heating elements (col. 4, lines 28-37). The thermistors are equivalent to Applicants' claimed temperature control means. Also disclosed are housings (14, 16) where analysis slides are supplied and moved between the incubator (24) and analysis means (25), via

Art Unit: 1743

a slide transfer mechanism (128). The housings (14,16) are equivalent to Applicants' claimed chemical analysis element supply section, recited in claims 2 and 6. The slide transfer mechanism (128) is equivalent to Applicants' claimed conveyer means recited in claims 2 and 6. Further, with respect to new claims 21-23, the slide transfer mechanism (128) is capable of removing a slide from read station and either returning the slide to the incubator (24) or discarding the slide, depending on whether endpoint analysis has been performed (col. 6, line 57 – col. 7, line 6). The position of the analysis slide is detected by means of an optical sensor (col. 6, lines 33-36). Also disclosed by Smith et al is the additional use of an ion activity measuring means comprising electrodes selective to ion activity (col. 3, lines 12-15), as recited in claims 1, 5, 9 and 16.

Smith et al fail to teach 1) a single incubator for receiving and holding all the analysis elements and maintaining a constant temperature for the analysis slides, and wherein the incubator may simultaneously maintain different temperatures for different slides and 2) a detector comprising a bar code reader for detection of the position of the analysis slides by way of a bar code on the slides.

With respect to the single incubator, Bogen et al teach an apparatus for stain processing analysis slides. The apparatus of Bogen et al is similar to that of Smith et al in that it functions as an automatic device for preparing slides for analysis. The device of Bogen et al comprises a slide rotor having multiple slide frames capable of holding slides in different slide positions, i.e. for receiving and storing multiple analysis slides, as recited in claims 10, 11, 13, 14, 17 and 18. See col. 5, lines 56-61. Each slide frame has a slide frame base having heating areas under each of the slide positions. The heating elements are formed into the slide frame base. Because each slide has its own heating element, the slides can be maintained at different temperatures

Art Unit: 1743

simultaneously, as recited in claims 11, 12, 14, 15, 18 and 19. The slide rotor along with the individualized slide frames and heating elements constitute a single incubator for multiple slides, as recited in claims 1, 5, 9 and 16. See col. 5, line 61 – col. 6, line 21. It would have been obvious to one of ordinary skill in the art to modify the two-incubator system of Smith et al and use a single incubator for multiple slides (as disclosed by Bogen et al) because such would provide more efficient operation where multiple slides need to be analyzed. The incubator described in Smith et al allows only two slides to be heated, whereas the incubator of Bogen et al allows multiple slides to be heated and also allows individualized heating, so that temperature conditions of one slide will not affect the temperature conditions of another. Therefore, multiple slide processing may take place even where each slide is being processed differently.

With respect to a detector comprising a bar code reader, as recited in claims 1, 5, 9, 16 and 20, Smith et al teaches using an optical source to detect the position of the slides (col. 6, lines 33-36 of Smith et al). Quenin et al teach an analyzer similar to that of Smith et al and Bogen et al where bar codes are disposed on each analysis slide. A bar code reader is provided to determine the kind of slide moving toward the dispensing station and also determine the position of the slide (col. 4). It would have been obvious to one of ordinary skill in the art to modify Smith et al by using a bar code to determine the position of the slides instead of an optical source, because in addition to determining the position of the slides, other useful information about the slide, such as type, can be determined when bar codes are used. Using bar codes will also provide a manner of keeping track, by way of computer data, of the analyses taking place in the automatic system.

Art Unit: 1743

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 USC 103, in view of the teachings of Smith et al, Bogen et al and Quenin et al.

3. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al, Bogen et al and Quenin et al as applied to claims 1, 2, 5, 6 and 9-20 above, and further in view of US Patent 5,814,277 to Bell et al.

With respect to claims 4 and 8, neither Smith et al, Bogen et al nor Quenin et al teach a diluting unit in the analysis systems.

Bell et al teach an automatic chemical analyzer comprising sample and reagent containers (22, 24). Aliquots of sample and reagent are drawn up from the chambers and dispensed into test cells. Bell et al disclose that the samples may be diluted automatically by dispensing buffer solution from reservoir (52) into the test cells. The automatic dilution of sample is disclosed as being advantageous when the sample concentration is too high or when limited amounts of sample are available for testing. Automated dilution also eliminates the potential for user error in sample dilution. See col. 9, lines 10-18.

It would have been obvious to one of ordinary skill in the art to use a diluting unit in the system of Smith et al to allow analysis even where the sample size is small. Also, it would have been obvious to the ordinarily-skilled artisan to use an automatic dilution system to reduce user error and increase the efficiency of the operation.

Therefore, for the reasons set forth above, Applicant's claimed invention is deemed to be obvious, within the meaning of 35 USC 103(a) in view of the teachings of Smith et al, Bogen et al and Quenin et al and further in view of Bell et al.

1. Applicant's arguments filed Nov. 26, 2003 have been fully considered but they are not persuasive. Applicants' arguments are directed to the incubator of the Bogen reference and bar code reader of the Quenin reference. Specifically, Applicants argue the function of the incubator and the bar code reader. Allegedly, the incubator of Bogen cannot maintain different temperatures for different slides and the bar code of Quenin cannot determine the position of the slides. First the examiner would like to point out that with respect to the incubator (claims 11, 12, 14, 15, 18 and 19) and the bar code (claims 5, 9, 16 and 20), the claims do not invoke 112, 6th paragraph, which would allow the function of the claims to be limitations which impart patentability to the claims. MPEP 2114 states, "apparatus claims must be structurally distinguishable from the prior art" and "apparatus claims cover what a device is not what a device does". The instant claims recite "incubator" and "bar code reader". The claims do not define these features in terms of their structure, but instead attempt to define them in terms of their function.

On the other hand, even if the function is considered, the Examiner is not persuaded that Bogen and Quenin fail to teach the incubator and bar code reader being capable of functioning in the capacities claimed by Applicants. Bogen teaches that for each microscope slide on the platform, there is an individual heating element associated with each microscope slide that moves along with platform with each slide. Bogen further teaches that each of the heating elements has its own electrical power connection and electrical control, as well as individual temperature sensors. Therefore, one of ordinary skill in the art would have believed that with the incubators of Bogen would have been "capable of maintaining different temperature for different slides".

Art Unit: 1748

With respect to the bar code reader, it should be noted that Smith et al teach the use of an optical source to determine the position of the slides. Smith et al do not teach bar code readers. It is conventional in the art to use bar code readers in a variety of capacities. Quenin teaches that bar code readers can be used to obtain information about the samples on the slide, such as type. Quenin also teaches that the bar code reader operates as the slides move toward the fluid dispensing station. Thus, the bar code reader of Quenin would obviously be able to detect the location of the slide – at minimum the bar code reader would be able to track the slide on its way to the fluid dispenser. One of ordinary skill in the art would have opted for a bar code reader over other optical sources because of the ability of the bar code reader to obtain additional information, such as type.

Applicants also question the combination of references and suggest that the Examiner used hindsight in formulating the rejection. In response, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The Examiner provided motivation for each of the modifications to the Smith reference. Also, no knowledge gleaned only from Applicants' disclosure has been used.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 571-272-1256. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

Art Unit: 1743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LIC


Jill Warden
Supervisory Patent Examiner
Technology Center 1700